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Orders for *Acta Crystallographica* and *Journal of Applied Crystallography* may be addressed to Munksgaard International Publishers Ltd., 35 Nørre Søgade, DK-1370 Copenhagen K, Denmark. Orders for complete volumes from subscribers in North America may alternatively be placed through Polycrystal Book Service, P.O. Box 11567, Pittsburgh, Pa. 15238, U.S.A.

### **Notes and News**

*Announcements and other items of crystallographic interest will be published under this heading at the discretion of the Editorial Board. The notes (in duplicate) should be sent to the Executive Secretary of the International Union of Crystallography (J. N. King, International Union of Crystallography, 13 White Friars Chester CH1 1NZ, England).*

### **Temperature Factors**

A number of recent X-ray and neutron diffraction studies have shown small

systematic discrepancies between X-ray and neutron temperature factors which are not readily understood and which do not appear related to errors in experimental measurements. In particular the ratio  $(U_{ii})_X((U_{ii})_N)$  seems frequently dependent on the value of  $i$ . To gain understanding of the source of such discrepancies and their possible significance the Commission on Neutron Diffraction of the IUCr decided, at the Amsterdam Congress, to gather information on X-ray and neutron diffraction temperature factors of crystals which have been studied accurately by both methods at identical temperatures.

Interested scientists are requested to send  $U_{ij}$  values together with information on the crystal symmetry and cell dimensions, the orientation of the specimen on the diffractometer, scattering factors used in the refinement, experimental temperature and experimental reproducibility as estimated by comparison of symmetry-related reflexions, and (for the neutron experiment only) the type of beam collimation and/or Soller slits, type of analyser crystal used if any, and estimate of second order contamination of the beam, to either Dr P. Coppens, Chemistry Department, State University of New York at Buffalo, Buffalo, New York 14214, U.S.A., or Dr T. Koetzle, Chemistry Department, Brookhaven National Laboratory, Upton, Long Island, New York 11973, U.S.A. Results will be analysed at regular intervals depending on the available volume of the data and communicated to participating laboratories.

### **Book Reviews**

*Works intended for notice in this column should be sent direct to the Book-Review Editor (J. H. Robertson, School of Chemistry, University of Leeds, Leeds LS2 9JT, England). As far as practicable books will be reviewed in a country different from that of publication.*

**Liquid phase epitaxy.** By G. M. BLOM, S. L. BLANK and J. M. WOODALL. Pp. x + 332, Figs. 294, Tables 40. Amsterdam: North Holland, 1974. Price f160.00 (about US \$66.75).

This special issue of the *Journal of Crystal Growth* presents the state of the art in the very important field of liquid-phase epitaxial growth. Its utility in the production of complex device structures for CW injection lasers, solid-state

lamps, microwave oscillators and bubble memories is well known. The volume contains 34 papers and four letters from experts ranging from thermodynamic evaluation and calculation of phase diagrams of III-V compounds to various aspects of L.P.E. growth under equilibrium conditions and in a kinetically controlled regime.

The cause of failure in both heterojunction and bubble devices is attributable to residual stress due to lattice mismatch, and several valuable papers are devoted to crystallographic properties and dislocations.

The authors are to be congratulated for bringing together an extensive number of separate papers and letters with a coherence that makes the volume readable and of considerable interest to those concerned either directly or indirectly with aspects of liquid-phase epitaxy.

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**Metallphysik.** By G. E. R. SCHULZE. Pp. xviii + 494, Figs. 272, Tables 34. Vienna, New York: Springer-Verlag, 1974. Price S 698, DM 98, approx. US \$40.00.

The book *Metallphysik*, written in German, is an advanced textbook designed for basic studies in metal physics. An introductory chapter on the metallic state covering crystal structure and electron theory is followed by four chapters dealing with details of: 1. The metallic state – space lattice, symmetry properties, lattice structure of metals, solid solution, thermodynamic equilibrium, phase diagram, crystallization and lattice defects; 2. Mechanical and thermal properties of perfect crystals – elastic properties and lattice vibrations; 3. Properties of real crystals – diffusion, theory of dislocations, lattice energy, twinning, martensite formation and metal-physics principles of improving mechanical properties; and 4. Electrical and magnetical properties – energy levels of electrons, conductors, semiconductors, insulators, metallic bonds, magnetism and theory of ferromagnetism.

The treatment of the topics listed here is often profound and the book includes 34 tables, 277 figures, about 150 references and indexes in German, English and Russian. Books from Springer are usually of a very high standard and this is no exception.

Professor Gustav E. R. Schulze has produced this second edition of his book after many years of lecturing in experimental physics at the University of Dresden, which has definitely influenced in a positive way the pedagogical quality. The use of the same system for marking chapters, formulae and figures may however in some cases be confusing.

Although the book is specially written for university students, one would like to recommend it to other people interested in the field, and with its systematic and broad treatment of a wide range of subjects it will certainly serve as a reference book in libraries.

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